(No Model.)

# A. KEMPSON.

## STOPPER FOR JARS, BOTTLES, &c.

No. 302,881. Patented July 29, 1884.

Fig. 1.

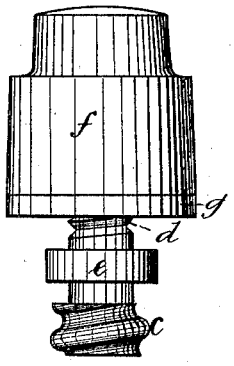



Fig. 5.

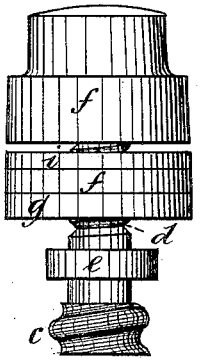



Fig. 2.

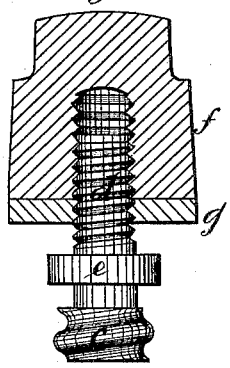



Fig. 3.

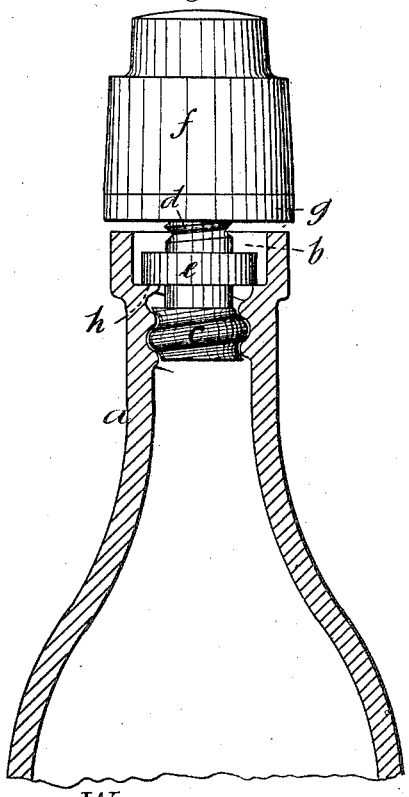



Fig. 6.

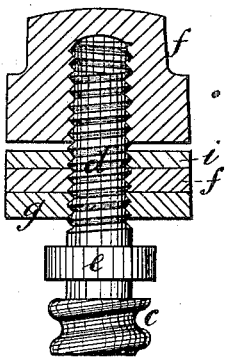
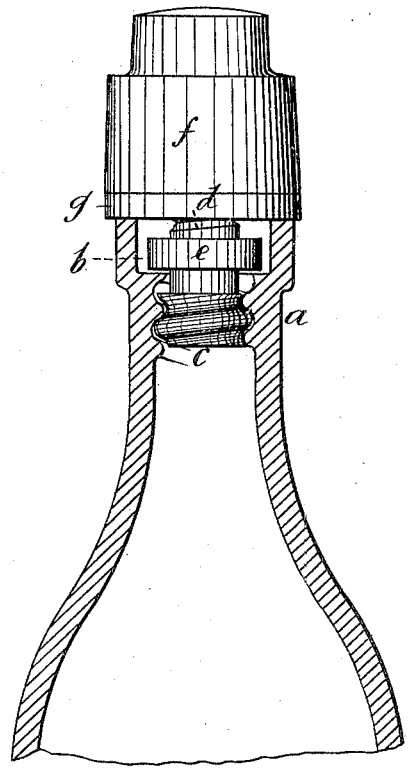



Fig. 4.




Witnesses.

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# UNITED STATES PATENT OFFICE.

ALFRED KEMPSON, OF TUNBRIDGE WELLS, COUNTY OF KENT, ENGLAND.

## STOPPER FOR JARS, BOTTLES, &c.

SPECIFICATION forming part of Letters Patent No. 302,881, dated July 29, 1884.

Application filed December 8, 1883. (No model.) Patented in England July 3, 1883, No. 3,285; in Germany November 13, 1883, No. 28,595, and in France November 19, 1883, No. 158,645.

*To all whom it may concern:*

Be it known that I, ALFRED KEMPSON, a subject of the Queen of Great Britain, residing at Tunbridge Wells, in the county of Kent, England, have invented new and useful Improvements in Stoppering Bottles, Jars, and like Vessels, of which the following is a specification.

This invention relates to improvements in stoppering bottles, jars, and like vessels, the object of the improvements being chiefly to avoid the necessity of allowing any material likely to affect the flavor or quality of the contents of the bottle or other vessel stoppered to come into contact with the said contents.

In carrying out my invention I employ a bottle the interior of the neck of which is formed with a female screw or its equivalent.

The improved stopper consists of a double screw of suitable material, preferably hard wood, one of the screws being adapted to fit into the mouth of the bottle. The other screw, which has a finer thread, projects above the top of the bottle-neck, and serves to receive a cap or cover of suitable material—such as hard wood—provided with a female screw-thread adapted to fit over the hereinbefore-described projecting screw of the stopper, and having an elastic washer, preferably of cork.

In order to enable my invention to be fully understood, I will proceed to describe the same by reference to the accompanying drawings, in which—

Figure 1 represents an elevation, and Fig. 2 a vertical section, of a bottle-stopper constructed according to my invention. Figs. 3 and 4 are vertical sections of a bottle-neck, showing my improved stopper applied thereto. Figs. 5 and 6 are an elevation and a vertical section, respectively, of a stopper similar to that shown in the preceding figures, but with the cap or cover formed in two parts.

Similar letters in all the figures represent similar parts.

I will first describe the stopper shown in Figs. 1 to 4.

*a* is the neck of a bottle, the interior of which is formed with a female screw-thread, as shown, the screw-thread not extending to the top of the mouth of the bottle, the diameter of the space *b*, between the top of the screw-thread and the mouth of the bottle, being somewhat larger than the diameter of the screw.

The improved stopper consists of a double screw, *c d*, of suitable material—such as hard wood—and is formed with a collar, *e*, between the screw-threads *c* and *d*. The screw *c* is adapted to fit loosely into the female screw-thread in the mouth of the bottle, the collar *e* passing freely into the mouth *b*. The other screw, *d*, has a finer thread than the screw *c*, and screws into the cap or cover *f*, as clearly shown in Fig. 2. The cap or cover *f* is made of any suitable material, but preferably of hard wood.

*g* is an elastic washer, preferably of cork, and which may be cemented to the bottom or under side of the cap or cover *f*.

To use the improved stopper, the cap *f* must be partly unscrewed from its screw *d*, so as to leave a space between the top of the screw *d* and the top of the female screw-thread in the cap *f*, as shown in Fig. 2. The stopper is then loosely screwed into the mouth of the bottle, as shown in Fig. 3, until the under side of the collar *e* comes against the shoulder *h* in the mouth of the bottle, which will prevent the screw *c* from entering farther into the bottle-neck. Then, by continuing to turn the cap or cover *f*, the same will be screwed on its screw *d*, so as to bring the elastic washer *g* over the mouth of the bottle, and thus form a hermetic joint, and at the same time the threads of the screw *c* will be drawn up against the female screw-thread in the neck of the bottle, so that the stopper will be held firmly in its place, as shown in Fig. 4.

To open the bottle, it is merely necessary to turn the cap or cover *f* in the reverse direction and the whole stopper will be withdrawn. Before again using the stopper it will be advisable to partly unscrew the cap or cover *f* from its screw *d*, as hereinbefore described.

The stopper shown in Figs. 5 and 6 is substantially the same as that shown in Figs. 1 to 4, except that the cap or cover *f* is formed in two parts with an elastic washer, *i*, between them. By thus forming the cap in two parts

a tighter grip on the screw *d* is obtained when the stopper is screwed down, the upper part of the cap forming a lock-nut, so that in the event of the screw *c* sticking in the neck from any cause—such, for example, as from the nature of the contents of the vessel—the cap *f* will be prevented from turning on its screw *d* when withdrawing the stopper.

Although I have described my invention as applied to a bottle, it is equally applicable to jars and like vessels.

It will be obvious that instead of forming the neck of the bottle or other vessel with a female screw-thread, it may be formed with vertical grooves or slots and a shoulder, in which case the stopper, instead of being formed with the screw-thread *c*, would be formed with a number of projections, corresponding with the vertical grooves or slots in the bottle-neck, the projections and grooves forming what may be termed a "bayonet-joint."

Having thus described my invention and the manner of performing the same, what I claim is—

1. A stopper for bottles, jars, and like vessels, consisting of a double screw or its described equivalent, one end of which is coarse and the other finer, an intermediate collar between the same, and a cap or cover having a female screw-thread fitting over the fine end of the screw, all as and for the purposes described.

2. In a stopper for bottles, jars, and like vessels, the combination of the coarse screw *c*, collar *e*, fine screw *d*, screw-cap *f*, and washer *g*, all as and for the purposes described.

3. The combination, with a bottle-neck having a female screw-thread or its described equivalent, the shoulder *h*, and the space *b*, of the stopper having the screws *c* and *d* or their described equivalent, the collar *e*, and cap *f*, all arranged and operating substantially as shown and described.

4. A stopper for bottles, jars, and like vessels, consisting of a double screw or its described equivalent, one end of which is coarse and the other finer, an intermediate collar between the same, and a cap or cover made in two parts, substantially as described, and having a female screw-thread fitting over the fine end of the screw, all as set forth.

ALFRED KEMPSON.

Witnesses:
G. F. REDFERN,
F. PRICE.